Environmental Front

Compiled by Cynthia Houston

Looking for Sharp Shooters

SOLDIERS invites readers to send in their best environmental photographs for an "Environmental Sharp Shooters" feature in the April 2002 issue.

Photographs will be judged by U.S. Army Environmental Center public affairs staff, and will be showcased in **Soldiers** as part of the Army's Earth Day 2002 celebration.

Color slides and prints are preferred, but electronic images and black-and-white prints will be accepted. Electronic images must be 5"X7" or larger .tif or .jpg images at 300 dpi. **Deadline for submission is Dec. 31.**

Entries should fit one of these categories:

Readiness: Environmental activities taking place during training exercises, deployments or day-to-day operations. Examples are Tactical Concealment Area rehabilitation; pollution-prevention efforts in the motor pool, office or field; restoring ranges between exercises or using prepared terrain features, such as hardened river crossings, during training; and use of "green ammunition."

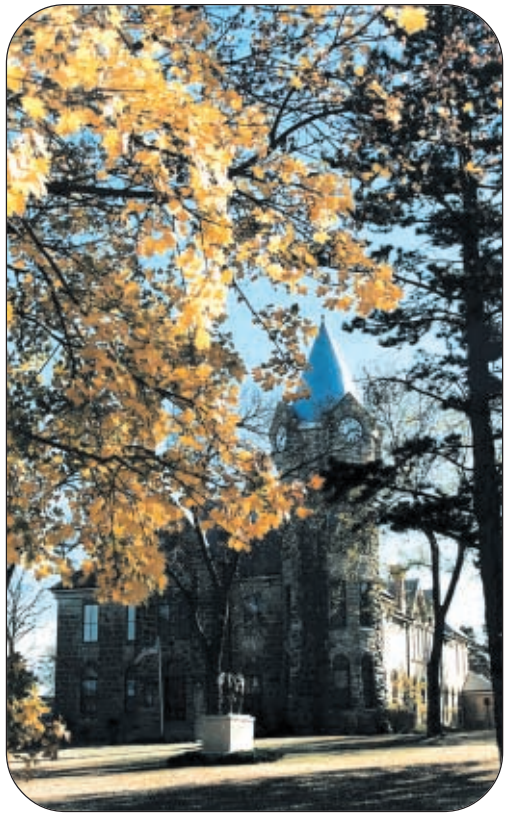
Stewardship: Army people working to protect or sustain natural or cultural resources, or shots demonstrating the diversity of plants and animals on Army land. Examples are archaeological digs, prescribed burnings or pictures of cultural resources or endangered species on Army installations.

Well-being: Army personnel, civilian employees and families enjoying the post environment. Examples are recreational fishing, use of post nature trails and family outings to post environmental areas.

Community Outreach: Army people working with local communities to protect shared resources or to host educational programs. Examples are National Public Lands Day and Earth Day activities, community riparian forest plantings and environmental-awareness classrooms.

Photos that are obviously posed or that show uniform or safety violations will be disqualified. Photos must be submitted with an accompanying application form available at **http://aec.army.mil**.

Contest photos can be color prints or slides, or high-quality digital images. Each entry must be accompanied by an application form.



For more information or to receive an application form and a complete set of rules, contact Cynthia Houston at **Environmental.Front@aec.apgea.army.mil** or call (DSN) 584-1270 or (410) 436-1270. — *U.S. Army Environmental Center Public Affairs Office*

Do Bullet Traps Get the Lead Out?

MARKSMANSHIP training on the U.S. military's 1,800 or so outdoor small-arms ranges typically results in more than 300 million rounds of spent ammunition accumulating in target areas each year.

The Army is taking significant steps to reduce the amount of lead released into the environment as a result of small-arms training. One effort focuses on the use of bullet traps.

Bullet traps are advertised as an economical technology choice for managing lead deposits on small-arms ranges. To validate these claims, the Army Environmental Center tested three popular commercial bullet trap designs — granular rubber, steel decelerator and rubber block type. The Department of Defense Environmental Security Technology Certification Program also funded testing of SACON, a recyclable, shock-absorbing concrete, as bullet-trapping material.

The testing revealed problems with respect to airborne lead dust releases, storm water transport and flammability of bullet-trap materials.

While bullet traps capture a significant portion of the lead that would otherwise be released or deposited directly on ranges, they do not retain all of the lead. The devices also varied in their ability to trap lead and were more expensive than other alternatives.

Tests showed that shock-absorbing concrete, known as SACON, performed well in capturing and containing bullets fired on Army small-arms ranges.

On the other hand, SACON performed well as a bullet-trapping material. Its lead stabilizing and low water permeability properties also reduce the leaching of lead into the surrounding soil.

Other management approaches offer better, low-cost alternatives to bullet traps. The lead-stopping properties of redesigned berms using soil-stabilizing additives and vegetative cover to reduce lead leaching are discussed in the "Prevention of Lead Migration and Erosion from Small Arms" guide.

Installations considering bullet traps for an outdoor range should first answer these questions:

- What level of lead debris will be captured by the trap, and will that level suffice?
- Will the metal wash or leach out of the trap over time?
- How will wastes generated by the trap be handled?
- What are the maintenance requirements, based on military ammunition and rates of use?
- How will it impact the use of the range?
- How will exposure to the elements affect the trap?

For more information, visit the USAEC Range XXI home page at **http://aec.army.mil/prod/usaec/rangexxi.htm**, or contact Steve Starbuck at **Steve.Starbuck@aec.apgea.army.mil** or (DSN) 584-6847 or (410) 436-6847. — *Gene Fabian, U.S. Army Aberdeen Test Center*

Environmental Awareness is Safety Awareness

JUNE is summer safety month and a good time to remember that you can take many steps while training or on the job that not only help to protect the environment but may prevent accidents.

- Avoid high speed off-road driving. This can prevent accidents and equipment damage, and can limit rutting and erosion of tactical roadways.
- Refill entrenchments before leaving training sites. This may save another soldier from a nasty fall, and it helps prevent future erosion damage.
- Police training areas after the exercise. What you leave behind, especially debris such as wire and ground stakes, can become a hazard to others.
- Store and label materials properly to avoid chemical hazards to personnel and the environment.
- Turn in unexpended ammunition to the ammo supply point to avoid safety and environmental problems.
- Read and understand office or shop safety and environmental procedures to prevent incidents from occurring and to know what to do in an emergency. — *USAEC PAO*

*Please send your contributions or questions to Cynthia Houston, National Outreach Team Leader, U.S. Army Environmental Center, 5179 Hoadley Road, Attn.: SFIM-AEC-PA, Bldg. 4415, Aberdeen Proving Ground, MD 21010-5401, or e-mail **Environmental.Front@aec.apgea.army.mil**. Houston can be reached by phone at (410) 436-1270 or (DSN) 584-1270.*